

Who is most at risk of HIV infection? Detailed data tables and technical notes

Technical notes:

Background on HIV reporting system

On January 1, 1999 the Massachusetts Department of Public Health (MDPH) started requiring clinical providers to submit case report forms with demographic and risk information about individuals diagnosed with HIV infection, as they had been doing for AIDS since 1983. Existing cases of diagnosed HIV infection through 1998 also were to be reported by the end of 1999. These cases are labeled “pre-1999” in the following analyses. New, as well as previously diagnosed HIV infections, continue to be reported. When comparing pre-1999 HIV diagnoses to HIV diagnoses 1999 through 2005, one should consider the differences in HIV reporting requirements for these two time periods. Since HIV infection diagnoses were not reported at the time of diagnosis prior to 1999 and clinical providers were given a relatively short time frame within which to report all prevalent HIV cases, the pre-1999 data are considered less complete than data reported after 1999. Additionally, pre-1999 HIV infection diagnoses do not include people who were diagnosed with HIV infection and who died before 1999 without being reported with AIDS, nor do they include individuals who were no longer receiving HIV-related health care in Massachusetts at the point when HIV (non-AIDS) reporting became mandatory.

Caveats of the data

While trends in diagnosis of HIV infection are our best indicator for those who are most at risk of HIV infection, HIV surveillance reflects the incidence of diagnoses among people who are in care and not the actual incidence of new infections. Like AIDS diagnoses, HIV infection diagnoses are not a direct measure of incidence of infection itself. People may be living with HIV infection for many years prior to being tested and seeking care, at which point the case is considered a “diagnosis” and reported to the MDPH HIV/AIDS Surveillance Program. Furthermore, as with early data for AIDS cases, the data from the first few years of a new reporting system can be unstable, and caution should be used in interpretation. During the time a reporting system is in its infancy, there is a greater likelihood that fluctuations in data are attributable to reporting patterns and clinician education efforts rather than actual changes in disease incidence.

Additionally, one must consider the effects of reporting lag when reviewing the preliminary 2005 HIV infection diagnoses. Although Massachusetts regulations require providers to submit HIV case reports in a timely fashion, many 2005 HIV infection diagnoses will be reported to the surveillance program after the release of this Epidemiologic Profile. Twenty-eight percent of HIV (non-AIDS) diagnoses from 2002 to 2004 were reported more than 6 months after diagnosis. Thus, the 2005 HIV data presented in this report may represent a substantial undercount. Therefore, although the data that follow report a decline in the number of HIV infection diagnoses in the past

year, it is possible that the true incidence of HIV infection diagnosis has reached a plateau or is perhaps increasing. Analyses suggest that the distribution of HIV infection diagnoses by race/ethnicity, gender and exposure mode for cases reported more than 6 months after diagnosis is not substantially different than the distribution of HIV cases reported within 6 months.

Table 1. People diagnosed with HIV infection by gender and year of diagnosis: Massachusetts, before 1999, 1999–2005¹

	Male		Female		Total
	N	%	N	%	
< 1999	15,734	77%	4,645	23%	20,379
1999	918	69%	407	31%	1,325
2000	808	69%	356	31%	1,164
2001	705	70%	298	30%	1,003
2002	719	68%	345	32%	1,064
2003	645	69%	288	31%	933
2004	656	70%	287	30%	943
2005 ²	595	74%	211	26%	806

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

² 2005 data are preliminary

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 2. People diagnosed with HIV infection by race/ethnicity and year of diagnosis: Massachusetts, before 1999, 1999–2005¹

	White NH		Black NH		Hispanic		API		AI/AN		Total ²
	N	%	N	%	N	%	N	%	N	%	
< 1999	11,259	55%	4,774	23%	4,172	20%	101	<1%	26	<1%	20,379
1999	560	42%	395	30%	338	26%	20	2%	3	<1%	1,325
2000	454	39%	398	34%	279	24%	26	2%	2	<1%	1,164
2001	413	41%	323	32%	235	23%	26	3%	2	<1%	1,003
2002	412	39%	356	33%	258	24%	23	2%	2	<1%	1,064
2003	366	39%	304	33%	237	25%	13	1%	0	0%	933
2004	360	38%	301	32%	251	27%	14	1%	2	<1%	943
2005 ³	322	40%	268	33%	192	24%	17	2%	1	<1%	806

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

² Totals include people with unspecified race/ethnicity

³ 2005 data are preliminary

NH = Non-Hispanic, API = Asian/Pacific Islander, AI/AN = American Indian/Alaskan Native

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 3. Males diagnosed with HIV infection by race/ethnicity and year of diagnosis: Massachusetts, before 1999, 1999–2005¹

	White NH		Black NH		Hispanic		API		AI/AN		Total ²
	N	%	N	%	N	%	N	%	N	%	
< 1999	9,485	60%	3185	20%	2928	19%	85	1%	19	<1%	15,734
1999	438	48%	234	25%	228	25%	12	1%	1	<1%	918
2000	366	45%	223	28%	191	24%	24	3%	0	0%	808
2001	338	48%	178	25%	164	23%	21	3%	1	<1%	705
2002	336	47%	186	26%	171	24%	15	2%	2	<1%	719
2003	315	49%	165	26%	150	23%	10	2%	0	0%	645
2004	311	47%	165	25%	163	25%	9	1%	0	0%	656
2005 ³	288	48%	153	26%	135	23%	14	2%	1	<1%	595

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis² Totals include people with unspecified race/ethnicity³ 2005 data are preliminary

NH = Non-Hispanic, API = Asian/Pacific Islander, AI/AN = American Indian/Alaskan Native

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 4. Females diagnosed with HIV infection by race/ethnicity and year of diagnosis: Massachusetts, before 1999, 1999–2005¹

	White NH		Black NH		Hispanic		API		AI/AN		Total ²
	N	%	N	%	N	%	N	%	N	%	
< 1999	1,774	38%	1,589	34%	1,244	27%	16	<1%	7	<1%	4,645
1999	122	30%	161	40%	110	27%	8	2%	2	<1%	407
2000	88	25%	175	49%	88	25%	2	1%	2	1%	356
2001	75	25%	145	49%	71	24%	5	2%	1	<1%	298
2002	76	22%	170	49%	87	25%	8	2%	0	0%	345
2003	51	18%	139	48%	87	30%	3	1%	0	0%	288
2004	49	17%	136	47%	88	31%	5	2%	2	1%	287
2005 ³	34	16%	115	55%	57	27%	3	1%	0	0%	211

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis² Totals include people with unspecified race/ethnicity³ 2005 data are preliminary

NH = Non-Hispanic, API = Asian/Pacific Islander, AI/AN = American Indian/Alaskan Native

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 5. People diagnosed with HIV infection by place of birth and year of diagnosis: Massachusetts, before 1999, 1999–2005¹

	US		Puerto Rico/ US Dependency ²		Non-US		Total
	N	%	N	%	N	%	
< 1999	15,839	78%	2,460	12%	2,080	10%	20,379
1999	914	69%	168	13%	243	18%	1,325
2000	741	64%	129	11%	294	25%	1,164
2001	631	63%	111	11%	261	26%	1,003
2002	629	59%	108	10%	327	31%	1,064
2003	586	63%	90	10%	257	28%	933
2004	591	63%	102	11%	250	27%	943
2005 ³	499	62%	66	8%	241	30%	806

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis² Ninety-five percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, and 4% were born in an unknown dependency³ 2005 data are preliminary

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 6. Males diagnosed with HIV infection by place of birth and year of diagnosis: Massachusetts, before 1999, 1999–2005¹

	US		Puerto Rico/ US Dependency ²		Non-US		Total
	N	%	N	%	N	%	
< 1999	12,535	80%	1,752	11%	1,447	9%	15,734
1999	673	73%	117	13%	128	14%	918
2000	544	67%	94	12%	170	21%	808
2001	466	66%	77	11%	162	23%	705
2002	468	65%	70	10%	181	25%	719
2003	448	69%	52	8%	145	22%	645
2004	466	71%	61	9%	129	20%	656
2005 ³	410	69%	50	8%	135	23%	595

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis² Ninety-five percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, and 4% were born in an unknown dependency³ 2005 data are preliminary

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 7. Females diagnosed with HIV infection by place of birth and year of diagnosis: Massachusetts, before 1999, 1999–2005¹

	US		Puerto Rico/ US Dependency ²		Non-US		Total
	N	%	N	%	N	%	
< 1999	3,304	71%	708	15%	633	14%	4,645
1999	241	59%	51	13%	115	28%	407
2000	197	55%	35	10%	124	35%	356
2001	165	55%	34	11%	99	33%	298
2002	161	47%	38	11%	146	42%	345
2003	138	48%	38	13%	112	39%	288
2004	125	44%	41	14%	121	42%	287
2005 ³	89	42%	16	8%	106	50%	211

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis² Ninety-five percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, and 4% were born in an unknown dependency³ 2005 data are preliminary

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 8. People diagnosed with HIV infection by exposure mode and year of diagnosis: Massachusetts, before 1999, 1999–2005¹

	MSM		IDU		MSM/ IDU		HTSX		Other		Pres. HTSX ²		Undeter- -mined ³		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
<1999	7,579	37%	7,168	35%	851	4%	2,034	10%	767	4%	1,338	7%	642	3%	20,379
1999	373	28%	391	30%	33	2%	198	15%	17	1%	250	19%	63	5%	1,325
2000	345	30%	248	21%	23	2%	191	16%	19	2%	265	23%	73	6%	1,164
2001	305	30%	207	21%	25	2%	157	16%	8	1%	221	22%	80	8%	1,003
2002	330	31%	182	17%	25	2%	168	16%	12	1%	254	24%	93	9%	1,064
2003	309	33%	144	15%	24	3%	108	12%	15	2%	214	23%	119	13%	933
2004	292	31%	149	16%	16	2%	106	11%	12	1%	219	23%	149	16%	943
2005 ⁴	315	39%	109	14%	18	2%	75	9%	2	<1%	179	22%	108	13%	806

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis² Heterosexual sex with partners with unknown risk and HIV status³ Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up⁴ 2005 data are preliminary

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 9. Males diagnosed with HIV infection by exposure mode and year of diagnosis: Massachusetts, before 1999, 1999–2005¹

	MSM		IDU		MSM/ IDU		HTSX		Other		Pres. HTSX ²		Undeter- -mined ³		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
<1999	7,579	48%	5,025	32%	851	5%	565	4%	481	3%	728	5%	505	3%	15,734
1999	373	41%	270	29%	33	4%	68	7%	9	1%	119	13%	46	5%	918
2000	345	43%	168	21%	23	3%	66	8%	13	2%	134	17%	59	7%	808
2001	305	43%	149	21%	25	4%	63	9%	3	<1%	110	16%	50	7%	705
2002	330	46%	127	18%	25	3%	56	8%	7	1%	117	16%	57	8%	719
2003	309	48%	103	16%	24	4%	43	7%	11	2%	86	13%	69	11%	645
2004	292	45%	95	14%	16	2%	45	7%	6	1%	99	15%	103	16%	656
2005 ⁴	315	53%	84	14%	18	3%	21	4%	0	0%	85	14%	72	12%	595

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

² Heterosexual sex with partners with unknown risk and HIV status

³ Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up

⁴ 2005 data are preliminary

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Note: The category of “presumed heterosexual sex” is used in Massachusetts to re-assign people who are reported with no identified risk but who are known to have not reported any other risks except heterosexual sex with a partner of unknown HIV status or risk. Massachusetts uses this category to distinguish these cases from other undetermined cases about which we know less. Nationally, the Centers for Disease Control and Prevention categorizes “presumed heterosexual sex” cases as “no identified risk” (NIR). As such, comparisons of the presumed heterosexual category cannot be made to national data. Caution should be used in interpreting data for presumed heterosexual, as it is still not clear what the exposure risk is for people in this category. Although a person may not report other risk behaviors such as injection drug use or male-to-male sex to his/her health care provider, it does not necessarily mean that he/she has not engaged in them. There are many barriers to disclosing HIV risk behaviors in the health care setting such as a limited patient-provider relationship or stigma.

Table 10. Females diagnosed with HIV infection by exposure mode and year of diagnosis: Massachusetts, before 1999, 1999–2005¹

	IDU		HTSX		Other		Pres. HTSX ²		Undeter-mined ³		Total
	N	%	N	%	N	%	N	%	N	%	N
<1999	2,143	46%	1,469	32%	286	6%	610	13%	137	3%	4,645
1999	121	30%	130	32%	8	2%	131	32%	17	4%	407
2000	80	22%	125	35%	6	2%	131	37%	14	4%	356
2001	58	19%	94	32%	5	2%	111	37%	30	10%	298
2002	55	16%	112	32%	5	1%	137	40%	36	10%	345
2003	41	14%	65	23%	4	1%	128	44%	50	17%	288
2004	54	19%	61	21%	6	2%	120	42%	46	16%	287
2005 ⁴	25	12%	54	26%	2	1%	94	45%	36	17%	211

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis² Heterosexual sex with partners with unknown risk and HIV status³ Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up⁴ 2005 data are preliminary

IDU = Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 11. People diagnosed with HIV infection by age at diagnosis: Massachusetts, 1999–2005¹

	<13		13 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 to 44		45 to 49		50+		Total
Year	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
<1999	370	2%	253	1%	1,352	7%	3,574	18%	5,074	25%	4,376	21%	2,799	14%	1,365	7%	1216	6%	20,379
1999	13	1%	19	1%	61	5%	136	10%	287	22%	309	23%	237	18%	143	11%	120	9%	1,325
2000	10	1%	27	2%	62	5%	142	12%	205	18%	281	24%	203	17%	106	9%	128	11%	1,164
2001	6	1%	14	1%	46	5%	112	11%	196	20%	233	23%	176	18%	128	13%	92	9%	1,003
2002	8	1%	23	2%	74	7%	124	12%	187	18%	224	21%	185	17%	113	11%	126	12%	1,064
2003	9	1%	13	1%	54	6%	94	10%	161	17%	198	21%	169	18%	119	13%	116	12%	933
2004	8	1%	16	2%	62	7%	97	10%	140	15%	187	20%	169	18%	126	13%	138	15%	943
2005 ²	3	<1%	8	1%	48	6%	85	11%	124	15%	140	17%	162	20%	127	16%	109	14%	806

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis² 2005 data are preliminary

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 12. Males diagnosed with HIV infection by age at diagnosis: Massachusetts, 1999–2005¹

	<13		13 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 to 44		45 to 49		50+		Total
Year	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
<1999	205	1%	154	1%	852	5%	2,644	17%	3,890	25%	3,533	22%	2,334	15%	1,135	7%	987	6%	15,734
1999	6	1%	6	1%	36	4%	77	8%	209	23%	223	24%	176	19%	101	11%	84	9%	918
2000	6	1%	13	2%	29	4%	86	11%	142	18%	197	24%	150	19%	83	10%	102	13%	808
2001	3	<1%	9	1%	19	3%	77	11%	131	19%	181	26%	122	17%	92	13%	71	10%	705
2002	3	<1%	13	2%	43	6%	70	10%	122	17%	157	22%	134	19%	79	11%	98	14%	719
2003	5	1%	9	1%	34	5%	54	8%	110	17%	151	23%	120	19%	77	12%	85	13%	645
2004	3	<1%	6	1%	37	6%	60	9%	92	14%	144	22%	122	19%	90	14%	102	16%	656
2005 ²	1	<1%	4	1%	30	5%	61	10%	90	15%	113	19%	124	21%	97	16%	75	13%	595

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis² 2005 data are preliminary

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 13. *Females* diagnosed with HIV infection by age at diagnosis: Massachusetts, 1999–2005¹

	<13		13 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 to 44		45 to 49		50+		Total
Year	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
<1999	165	4%	99	2%	500	11%	930	20%	1,184	25%	843	18%	465	10%	230	5%	229	5%	4,645
1999	7	2%	13	3%	25	6%	59	14%	78	19%	86	21%	61	15%	42	10%	36	9%	407
2000	4	1%	14	4%	33	9%	56	16%	63	18%	84	24%	53	15%	23	6%	26	7%	356
2001	3	1%	5	2%	27	9%	35	12%	65	22%	52	17%	54	18%	36	12%	21	7%	298
2002	5	1%	10	3%	31	9%	54	16%	65	19%	67	19%	51	15%	34	10%	28	8%	345
2003	4	1%	4	1%	20	7%	40	14%	51	18%	47	16%	49	17%	42	15%	31	11%	288
2004	5	2%	10	3%	25	9%	37	13%	48	17%	43	15%	47	16%	36	13%	36	13%	287
2005 ²	2	1%	4	2%	18	9%	24	11%	34	16%	27	13%	38	18%	30	14%	34	16%	211

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis² 2005 data are preliminary

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 14. People diagnosed with HIV infection by Health Service Region (HSR) ¹: Massachusetts, 1999–2005²

	Boston		Central		Metro West		Northeast		Southeast		Western		Prisons ³		Total ⁴
Year	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
<1999	7,060	35%	1,784	9%	2,491	12%	2,756	14%	2,888	14%	2,340	11%	1,054	5%	20,379
1999	383	29%	93	7%	159	12%	188	14%	192	14%	191	14%	118	9%	1,325
2000	375	32%	88	8%	151	13%	156	13%	177	15%	151	13%	66	6%	1,164
2001	311	31%	67	7%	117	12%	155	15%	166	17%	134	13%	53	5%	1,003
2002	366	34%	103	10%	148	14%	154	14%	144	14%	106	10%	43	4%	1,064
2003	316	34%	98	11%	118	13%	148	16%	111	12%	114	12%	28	3%	933
2004	289	31%	82	9%	120	13%	158	17%	123	13%	138	15%	33	3%	943
2005 ⁵	272	34%	70	9%	124	15%	129	16%	100	12%	93	12%	18	2%	806

¹ Reflects the health service region of a person's residence at the time of report (not necessarily current residence); See Epidemiologic Profile General Appendices, Health Service Region Maps, available at http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf for configuration of health service regions.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

³ HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility.

⁴ Totals include 9 people of unknown HSR

⁵ 2005 data are preliminary

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

People diagnosed with HIV infection within the three-year period 2003–2005

Table 15. People diagnosed with HIV infection by gender and race/ethnicity: Massachusetts, 2003–2005¹

Race/Ethnicity:	Male		Female	
	N	%	N	%
White Non-Hispanic	914	48%	134	17%
Black Non-Hispanic	483	25%	390	50%
Hispanic	448	24%	232	30%
Asian/Pacific Islander	33	2%	11	1%
American Indian/Alaska Native	1	<1%	2	<1%
Unknown	17	1%	17	2%
Total	1896	100%	786	100%

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis;
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding);
Data as of 7/1/06

Table 16. People diagnosed with HIV infection by gender and exposure mode: Massachusetts, 2003–2005¹

Exposure Mode:	Male		Female	
	N	%	N	%
Male-to-Male Sex (MSM)	916	48%	N/A	N/A
Injection Drug Use (IDU)	282	15%	120	15%
MSM/IDU	58	3%	N/A	N/A
Heterosexual Sex	109	6%	180	23%
Other	17	1%	12	2%
Total Undetermined	514	27%	474	60%
• Presumed Heterosexual Sex ²	270	14%	342	44%
• Undetermined ³	244	13%	132	17%
Total	1,896	100%	786	100%

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

² Heterosexual sex with partners with unknown risk and HIV status

³ Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up;

N/A = Not Applicable; Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 17. People Diagnosed with HIV Infection by Race/Ethnicity¹ and Place of Birth: MA, 2003–2005²

Race/Ethnicity:	US		Puerto Rico/ US Dependency ³		Non-US		Total
	N	%	N	%	N	%	N
White NH	965	92%	5	<1%	78	7%	1,048
Black NH	432	49%	2	<1%	439	50%	873
Hispanic	239	35%	251	37%	190	28%	680
API	12	27%	0	0%	32	73%	44

¹ Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis;

³ Ninety-seven percent of people diagnosed with HIV infection from 2003-2005 who were born in a US dependency were born in Puerto Rico, <1% were born in the US Virgin Islands and 3% were born in an unknown US dependency

NH = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 18. Males diagnosed with HIV infection by race/ethnicity¹ and place of birth: Massachusetts, 2003–2005²

Race/Ethnicity:	US		Puerto Rico/US Dependency ³		Non-US		Total
	N	%	N	%	N	%	N
White NH	850	93%	2	<1%	62	7%	914
Black NH	292	60%	2	<1%	189	39%	483
Hispanic	157	35%	159	35%	132	29%	448
API	11	33%	0	0%	22	67%	33
All Males⁴	1,324	70%	163	9%	409	22%	1,896

¹ Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis;

³ Ninety-seven percent of people diagnosed with HIV infection from 2003-2005 who were born in a US dependency were born in Puerto Rico, <1% were born in the US Virgin Islands and 3% were born in an unknown US dependency

⁴ Totals include people of American Indian/Alaska Native and Other/Unknown race/ethnicity

NH = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 19. Females diagnosed with HIV infection by race/ethnicity¹ and place of birth: Massachusetts, 2003–2005²

Race/Ethnicity:	US		Puerto Rico/US Dependency ³		Non-US		Total
	N	%	N	%	N	%	N
White NH	115	86%	3	2%	16	12%	134
Black NH	140	36%	0	0%	250	64%	390
Hispanic	82	35%	92	40%	58	25%	232
All Females⁴	352	45%	95	12%	339	43%	786

¹ Data for American Indian/Alaska Native, Asian/Pacific Islander and Other/Unknown race/ethnicity are not presented due to small numbers

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis;

³ Ninety-seven percent of people diagnosed with HIV infection from 2003-2005 who were born in a US dependency were born in Puerto Rico, <1% were born in the US Virgin Islands and 3% were born in an unknown US dependency

⁴ Totals include people of American Indian/Alaska Native, Asian/Pacific Islander and Other/Unknown race/ethnicity

NH = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 20. People diagnosed with HIV infection by race/ethnicity¹ and exposure mode: Massachusetts, 2003–2005²

Exposure Mode:	White NH		Black NH		Hispanic		API	
	N	%	N	%	N	%	N	%
MSM	622	59%	128	15%	144	21%	16	36%
IDU	151	14%	82	9%	163	24%	-- ³	-- ³
MSM/IDU	45	4%	4	<1%	9	1%	0	0%
HTSX	53	5%	119	14%	109	16%	-- ³	-- ³
Other	11	1%	8	1%	10	1%	-- ³	-- ³
Total Undetermined	166	16%	532	61%	245	36%	21	48%
Pres. HTSX ⁴	88	8%	356	41%	152	22%	11	25%
Undetermined ⁵	78	7%	176	20%	93	14%	10	23%
Total	1,048	100%	873	100%	680	100%	44	100%

¹ Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis;

³ Percentages calculated from a numerator of less than 5 and a denominator of less than 100 are not presented

⁴ Heterosexual sex with partners with unknown risk and HIV status

⁵ Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up
NH = Non-Hispanic, API = Asian/Pacific Islander, MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 21. Males diagnosed with HIV infection by race/ethnicity¹ and exposure mode: Massachusetts, 2003–2005²

	White NH		Black NH		Hispanic		API	
Exposure Mode:	N	%	N	%	N	%	N	%
MSM	622	68%	128	27%	144	32%	16	48%
IDU	100	11%	56	12%	123	27%	-- ³	-- ³
MSM/IDU	45	5%	4	1%	9	2%	0	0%
HTSX	20	2%	52	11%	35	8%	-- ³	-- ³
Other	8	1%	4	1%	5	1%	-- ³	-- ³
Total Undetermined	119	13%	239	49%	132	29%	15	45%
Pres. HTSX ⁴	55	6%	138	29%	69	15%	7	21%
Undetermined ⁵	64	7%	101	21%	63	14%	8	24%
Total	914	100%	483	100%	448	100%	33	100%

¹ Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis;³ Percentages calculated from a numerator of less than 5 and a denominator of less than 100 are not presented⁴ Heterosexual sex with partners with unknown risk and HIV status⁵ Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up
NH = Non-Hispanic, API = Asian/Pacific Islander, MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 22. Females diagnosed with HIV infection by race/ethnicity¹ and exposure mode: Massachusetts, 2003–2005²

	White NH		Black NH		Hispanic	
Exposure Mode:	N	%	N	%	N	%
IDU	51	38%	26	7%	40	17%
HTSX	33	25%	67	17%	74	32%
Other	3	2%	4	1%	5	2%
Total Undetermined	47	35%	293	75%	113	49%
Pres. HTSX ⁴	33	25%	218	56%	83	36%
Undetermined ⁵	14	10%	75	19%	30	13%
Total	134	100%	390	100%	232	100%

¹ Data for American Indian/Alaska Native, Asian/Pacific Islander and Other/Unknown race/ethnicity are not presented due to small numbers² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis;³ Percentages calculated from a numerator of less than 5 and a denominator of less than 100 are not presented⁴ Heterosexual sex with partners with unknown risk and HIV status⁵ Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up
NH = Non-Hispanic, API = Asian/Pacific Islander, IDU = Injection Drug Use, HTSX = Heterosexual Sex, Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 23. People diagnosed with HIV infection by Health Service Region (HSR)¹ and gender: Massachusetts, 2003–2005²

Health Service Region:	Male		Female		Total
	N	%	N	%	N
Boston HSR	657	75%	220	25%	877
Central HSR	150	60%	100	40%	250
Metro West HSR	268	74%	94	26%	362
Northeast HSR	281	65%	154	35%	435
Southeast HSR	253	76%	81	24%	334
Western HSR	217	63%	128	37%	345
Prisons ³	70	89%	9	11%	79
MA Total	1,896	71%	786	29%	2,682

¹ Reflects the health service region of a person's residence at the time of report (not necessarily current residence); See Epidemiologic Profile General Appendices, Health Service Region Maps, available at

http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf for configuration of health service regions

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

³ HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 24. Percentage distribution of people diagnosed with HIV infection by Health Service Region (HSR)¹ and race/ethnicity: Massachusetts, 2003–2005²

	White NH	Black NH	Hispanic	API	AI/AN	Total
Boston HSR	36%	40%	22%	1%	0%	877
Central HSR	41%	30%	27%	1%	<1%	250
Metro West HSR	47%	35%	14%	2%	0%	362
Northeast HSR	35%	30%	29%	4%	<1%	435
Southeast HSR	60%	24%	14%	1%	<1%	334
Western HSR	25%	22%	50%	1%	0%	345
Prisons ³	25%	43%	32%	0%	0%	79
MA Total	39%	33%	25%	2%	<1%	2,682

¹ Reflects the health service region of a person's residence at the time of report (not necessarily current residence); See Epidemiologic Profile General Appendices, Health Service Region Maps, available at

http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf for configuration of health service regions

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

³ HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility

NH = Non-Hispanic, API = Asian/Pacific Islander, AI/AN = American Indian/Alaska Native

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Table 25. Percent of people diagnosed with HIV infection by Health Service Region (HSR)¹ and exposure mode: Massachusetts, 2003–2005²

Health Service Region:	MSM	IDU	MSM/ IDU	HTSX	Other	Pres. HTSX ³	Undet. ⁴	Total
Boston HSR	45%	10%	2%	8%	1%	20%	14%	877
Central HSR	23%	24%	2%	13%	3%	27%	9%	250
Metro West HSR	36%	7%	2%	9%	1%	28%	16%	362
Northeast HSR	28%	13%	2%	12%	1%	26%	18%	435
Southeast HSR	40%	15%	3%	10%	1%	17%	14%	334
Western HSR	21%	24%	3%	18%	2%	21%	12%	345
Prison ⁵	10%	47%	1%	8%	<1%	28%	6%	79
MA Total	34%	15%	2%	11%	1%	23%	14%	2,682

¹ Reflects the health service region of a person's residence at the time of report (not necessarily current residence); See Epidemiologic Profile General Appendices, Health Service Region Maps, available at http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf for configuration of health service regions

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis

³ Heterosexual sex with partners with unknown risk and HIV status

⁴ Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up

⁵ HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex; Undet. = Undetermined

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 7/1/06

Profile of people testing for HIV at publicly-funded sites

Technical Notes:

Program utilization data for HIV/AIDS prevention services describe people who utilize these services and who may be at risk for HIV infection. Data from HIV testing programs can be used to describe demographics and HIV risk behavior in a population. The following tables contain data on clients utilizing state-funded counseling and testing sites. These settings include community health centers, hospitals, jails, and sexually transmitted disease clinics. An estimated 30% of people who get tested for HIV infection in Massachusetts get tested at one of these sites; therefore, these data are not representative of all people testing for HIV infection in Massachusetts. It is important to note that the data presented in this section represent tests performed and not individual clients; therefore the data may contain more than one test for some people.

Table 26. Number and percent of positive HIV tests¹ by gender, race/ethnicity, age of client and risk category: Massachusetts, 2005			
HIV Tests by Gender of Client:	Total Tests	Total Positive Results	Percent Positive
Male	29,082	312	1.1%
Female	15,573	114	0.7%
Unknown ²	305	4	1.3%
HIV Tests by Race/Ethnicity of Client:	Total Tests	Total Positive Results	Percent Positive
White	19,224	122	0.6%
African-American	8,331	123	1.5%
Latino	11,480	120	1.0%
Asian/Asian-American	948	4	0.4%
American Indian/Aleutian/Eskimo	146	0	0.0%
Haitian	827	19	2.3%
Brazilian	848	12	1.4%
Portuguese	618	4	0.6%
Cape Verdean	718	7	1.0%
Other	1,128	13	1.2%
Unknown ²	692	6	0.9%
HIV Tests by Age of Client, in Years:	Total Tests	Total Positive Results	Percent Positive
Under 13	93	2	2.2%
13 to 19	3,648	9	0.2%
20 to 24	9,797	40	0.4%
25 to 29	8,325	51	0.6%
30 to 34	5,880	77	1.3%
35 to 39	5,400	71	1.3%
40 to 44	4,676	85	1.8%
45 to 49	3,231	44	1.4%
50+	3,325	45	1.4%
Unknown ²	585	6	1.0%
HIV Tests by Risk Category³:	Total Tests	Total Positive Results	Percent Positive
Male-to-male sex (MSM)	4,243	133	3.1%
MSM/IDU	236	9	3.8%
Injecting Drug User (IDU)	6,576	72	1.1%
Heterosexual Sex (HTSX)	31,575	179	0.6%
Other/No Identified Risk	2,330	37	1.6%
Total	44,960	430	1.0%
¹ Tests performed at publicly funded HIV counseling and testing sites. (People also test for HIV at non-publicly funded sites for whom data are not represented in this table); ² Unknown indicates that the data were missing or unreadable ³ Data collected on possible exposure on the C&T report form were aggregated using the CDC risk hierarchy in order to make these data more comparable to the HIV/AIDS case data. Data Source: MDPH HIV/AIDS Bureau HIV Counseling and Testing Program. Data as of 7/1/06			

Technical Notes:

The following tables include data about number of sexual partners and condom use as reported by Massachusetts residents through anonymous telephone interviews in 2005. This ongoing random-digit-dial telephone survey, the Behavioral Risk Factor Surveillance System (BRFSS), covers a broad range of topic areas (including sexually-related risk) and is part of a CDC-funded national survey program.

Sex with multiple partners has historically been correlated with other predictors of HIV transmission. Reducing numbers of sexual partners has been an HIV/STD prevention intervention goal, as has increasing condom use. Data regarding the prevalence of each of these behaviors follows.

Table 27. Number of sexual partners in past year¹ among adult BRFSS respondents ages 18–64 years: Massachusetts, 2004–2005				
	0 Partners	1 Partner	2 + Partners	N²
Total:	15%	75%	10%	5,116
Age in Years:	0 Partners	1 Partner	2 + Partners	N
18-24	23%	47%	29%	346
25-34	6%	84%	10%	951
35-44	8%	84%	8%	1,308
45-64	21%	75%	4%	2,467
Sex:	0 Partners	1 Partner	2 + Partners	N
Male	11%	75%	14%	2,126
Female	19%	75%	6%	2,990
Race/Ethnicity:	0 Partners	1 Partner	2 + Partners	N
White NH	14%	77%	8%	4,112
Black NH	20%	60%	20%	248
Hispanic	18%	65%	17%	519
Asian	22%	69%	8%	92
NH= Non-Hispanic				
¹ "Number of sexual partners in past year" is a state-added question administered to a sub-sample of BRFSS respondents.				
² Only respondents with known values are included in this table. Column sub-totals may not equal overall total due to missing values.				
Data Source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2004-2005				

Table 28. Number of sexual partners in the past year¹, <i>male</i> BRFSS respondents ages 18–64: Massachusetts, 2004–2005				
	0 Partners	1 Partner	2+ Partners	N²
Total Males	11%	75%	14%	2,126
Age in Years:	0 Partners	1 Partner	2+ Partners	N
18-24	24%	33%	42%	144
25-34	5%	81%	13%	346
35-44	5%	83%	12%	558
45-64	14%	81%	6%	1,064
Race/Ethnicity³:	0 Partners	1 Partner	2+ Partners	N
White NH	11%	77%	11%	1,746
Black NH	9%	61%	30%	98
Hispanic	12%	60%	28%	181
Sex of Partner⁴:	0 Partners	1 Partner	2+ Partners	N
Same Sex	Not Applicable	56%	44%	111
Opposite Sex	Not Applicable	86%	14%	1,677
NH= Non-Hispanic ¹ "Number of sexual partners in past year" is a state-added question administered to a sub-sample of BRFSS respondents. ² Only respondents with known values are included in this table. Column sub-totals may not equal overall total due to missing values. ³ Data for Asian is not presented due to small numbers ⁴ Only asked of sexually active adults Data source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2004-2005				

Table 29. Number of sexual partners in the past year¹, female BRFSS respondents ages 18–64 Massachusetts, 2004–2005				
	0 Partners	1 Partner	2+ Partners	N²
Total Females	19%	75%	6%	2,990
Age in Years:	0 Partners	1 Partner	2+ Partners	N
18-24	23%	60%	18%	202
25-34	7%	87%	6%	605
35-44	11%	85%	3%	750
45-64	29%	70%	1%	1,403
Race/Ethnicity³:	0 Partners	1 Partner	2+ Partners	N
White NH	18%	77%	6%	2,366
Black NH	31%	58%	11%	150
Hispanic	24%	70%	5%	338
Sex of Partner⁴:	0 Partners	1 Partner	2+ Partners	N
Same sex	Not Applicable	91%	9%	85
Opposite sex	Not Applicable	94%	6%	2,128
NH= Non-Hispanic ¹ "Number of sexual partners in past year" is a state-added question administered to a sub-sample of BRFSS respondents. ² Only respondents with known values are included in this table. Column sub-totals may not equal overall total due to missing values. ³ Data for Asian is not presented due to small numbers ⁴ Only asked of sexually active adults Data source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2004-2005				

Table 30. Condom use at last sexual encounter, BRFSS respondents ages 18–64¹: Massachusetts, 2004–2005		
	% Used Condom	Total N²
Total:	25%	4,052
Sex:	% Used Condom	Total N
Male	26%	1,822
Female	23%	2,230
Race/Ethnicity³:	% Used Condom	Total N
White NH	22%	3,285
Black NH	40%	194
Hispanic	38%	394
Number of Partners:	% Used Condom	Total N
1	20%	3,590
2	54%	204
3+	64%	214
Sex of Partner:	% Used Condom	Total N
Same Sex – Male	52%	118
Opposite Sex – Male	25%	1,684
Same Sex – Female	3%	85
Opposite Sex – Female	24%	2,133
NH= Non-Hispanic ¹ Only asked of sexually active adults ² Only respondents with known values are included in this table. Column sub-totals may not equal overall total due to missing values. ³ Data for Asian is not presented due to small numbers Data Source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2004-2005		

Table 31. Ever tested for HIV, BRFSS respondents age 18–64: Massachusetts, 1994–2005

Year:	Total N ¹	% Ever Tested for HIV
1994	2,595	30%
1995	2,429	37%
1996	2,659	39%
1997	2,718	46%
1998	3,840	42%
1999	5,605	46%
2000	5,618	48%
2001	5,787	46%
2002	5,906	47%
2003	6,281	47%
2004	6,454	46%
2005	6,508	41%

¹ This question was one of the core federal questions posed to all respondents to the annual BRFSS between the ages of 18-64. Respondents with missing values for this item were not included in this table.

Data Source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 1994-2005

Table 32. Ever tested for HIV by number of sexual partners in past year¹, BRFSS respondents age 18–64: Massachusetts, 2004–2005

	Total N ²	% Ever Tested for HIV
Total:	4,995	46%
Number of Partners:	Total N	% Ever Tested for HIV
0	1,022	31%
1	3,511	47%
2	207	52%
3+	215	57%

¹ "Number of sexual partners in past year" is a state-added question administered to a sub-sample of BRFSS respondents.

² Total number of participants that responded to both number of sexual partners and ever tested for HIV.

Data Source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2005